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RESULTS OF THE OPERATIVE TREATMENT
OF
CANCER OF THE BREAST.

BY

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SURGEON TO THE ROYAL INFIRMARY,
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EDINBURGH:

PRINTED BY NEILL & COMPANY.

1882.



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RESULTS OF THE OPERATIVE TREATMENT
OF CANCER OF THE BREAST.

MR PRESIDENT AND GENTLEMEN,—Nearly every surgeon in time gets a hobby. He does one or two operations of a particular kind; he is pleased with the result of them, and looks out for similar cases; and these soon come, because the cured patients send their friends. Now, even if this operation be of no great novelty, still, when a sufficient number of cases has been collected, it is the surgeon's duty to lay his results before his brethren for their criticism and discussion. If nothing better comes of it, they will at least afford data by which our successors of the next generation will be able to measure the amount of improvement they have made, just as we ourselves turn back to the work of our forefathers and compare their level with ours.

Cancer is on the increase in this country. It is a painful idea, but there seems to be little doubt about it. Is it possible that this is coincident with our full habit of living as a people? We certainly do eat much more plentifully, and of richer and better food than any other nation in the world. More especially do we consume a vast quantity of meat, and drink the strongest beer and the most generous wines that can be made. My experience is that cancer affects, as a rule, thoroughly robust and healthy persons, and not the half-starved and devitalised ones. If one sees a ruddy-cheeked, broad-shouldered old fellow standing in the surgical waiting-room of a hospital with a big muffler over his mouth, just leaving his nose out, one may make a very good guess at him as a probable sufferer from cancer of the lip or tongue. And the better the condition of the individual, the more rapid and infective is the cancer. When we do come across a mammary scirrhous in some lean, tea-shrivelled old maid,

it generally grows very slowly. There can be no doubt that cancer and good nutrition, as a rule, go together, so that it has always seemed to me a great pity that the term "cancerous cachexia" has become so common. In the early stage of cancer there is no such condition. Where is the cancerous cachexia in the red-faced, healthy-looking farmer who develops a little malignant sore on his tongue? The bodily state indicated by the term "cachexia" is only manifested when the disease has attained a terrible climax, and worn him out with pain and anxiety. Then, indeed, he looks woebegone enough, and is pointed out to students as an example of the cancerous cachexia, with the result, that they go away, and for the rest of their lives, think that everybody who has cancer *must* present this malignant aspect, and that, if he has not got the said aspect, he has not got cancer. This notion often leads to serious error in the early detection of cancerous disease, and it is to be hoped that the term will soon die a natural death, inasmuch as it does more harm by misleading the rising generation than it does good by its use in indicating a particular state of body.

We in Liverpool happen to live in a district where cancer is common. We are in an area which the registrar-general's statistics clearly show to be of a malignant habit. The cause of this it is impossible to tell, but it is a fact; and possibly thus it is that my attention has for some time back been drawn to the subject. In 1877 I published a little article in the Liverpool Reports, based upon a communication read to a meeting of our branch of the British Medical Association. In this it was asserted that surgeons do not remove cancers of the breast. After an interval of five years I feel obliged to reassert the statement. Surgeons, as a rule, do not remove cancers of the breast. They persuade their patients that they do, and they almost persuade themselves. But there is always that little bit which they leave behind, and which they fondly hope will not grow, because it is such a little bit. Alas! that so little leaven should leaven the whole lump! If one turns to the surgery books of a hundred and fifty or two hundred years ago, the true method of removing a cancerous breast will be found. The breast

was laid hold of with great pincers, and having been cut clean off, the surface was seared with a red-hot cautery. Against a proceeding so shocking to the eye modern taste revolted, and so, for many years, surgeons have been removing a little elliptical bit of skin including the nipple, and have been carefully dissecting out the subjacent mamma. Then the remaining skin, all impregnated with cancer germs, has been carefully laid down again and neatly stitched together, so that everything should heal up quickly. Hence, removal of a cancerous breast after this fashion came to be regarded as a comparatively slight operation. Very few people died as an immediate result of it—very few indeed. Unfortunately, at a little later period, they all died from want of a little more of it; so that, looked at from another point of view, it was the most useless of all operations, inasmuch as it never effected a cure. My present contention, therefore, is for a return to the old plan of sweeping everything away and leaving a great hole, if you like. The operation will no longer be the bit of surgical tailoring that it has been, and many more persons will die from it. But many more also will be spared to live useful lives, and escape the horrors of a return tenfold more distressing than the original evil.

I need hardly descant upon the remarkable revolution that has taken place during the last fifteen years in our views as to the removal of infected glands. When I was a student, a proposition to clear out the axilla would have been considered madness. In the present paper a principal object is to advocate the removal of the axillary glands, as well as the breast, in *all* cases, whether we can feel them enlarged or not—in fact, to make a clearing out of the axilla a necessary part of the operation for removal of the breast. I have been quietly practising this for three or four years, having been driven to the conclusion that it was the right thing to do, by discovering that, even in those cases where certain glands could distinctly be felt enlarged, when the axilla was opened, small ones were discovered, which, although most palpably affected, were quite incapable of being felt from the outside. From this it follows that the usual fumbling in the axilla which is commonly practised is all

nonsense. When the glands are as big as walnuts, any first-year student can tell that they are affected. But what I wish with all earnestness to insist upon is that there is a stage—the earliest stage—when they are certainly infected, although to the touch, through layers of fat and skin, nothing amiss can be felt. When a dresser, at the end of his report upon a case of mammary scirrhus, winds up with the stock phrase, “Glands in the axilla not affected,” I immediately stop him with, “How do you know? All that you ought to say is that you can’t feel them, which is a totally different matter.”

Of course, no sooner does one begin to think about this than it seems a very ordinary matter of course; and so it is. But the remarkable thing is that it has not been practically acted upon; and even now, after we have for a good many years got over our nervousness about clearing out the axilla, this proceeding is, by the great majority of surgeons, reserved for those cases, where, as I have just observed, the glands are as big as walnuts. When they cannot be plainly felt, the axilla is left untouched, with the result that the patient goes away, and in a few months comes back with the breast cicatrix quite sound, but the armpit filled with a mass of cancer, which has got such a hold of the vessels and nerves as to render its removal impossible. Every surgeon has seen many such cases, and has felt bitterly the disappointment of having removed and cured the original evil and been baulked by its appearance in the glands. Now, at the time of the breast removal, fifteen minutes more work would very likely have sufficed to prevent this. While the glands are yet small, they and the whole fat and cellular tissue of the axilla can be pulled out with the fingers with the greatest ease; and while I am willing to admit that the opening of the cavity adds not a little to the danger of the original operation, I argue that the increased immediate risk is far more than counterbalanced by the increased protection against return of the disease. I beg leave, therefore, gentlemen, most strongly to urge the invariable clearing out of the axillary glands along with the removal of the breast, the one operation being useless without the other. As you cannot tell whether the glands are

affected or not till you see them in your hand, let them be *always* removed, and so increase the patient's chances of future immunity.

I need not inflict upon you the steps of an ordinary operation for removing the breast and clearing out the axilla ; but when a man has done any job a good many times, he is sure to find out some small but perhaps useful details. In most cases these may not be of any importance ;—in some they may just turn the balance and save a weakly patient. May I venture to mention a few which have impressed themselves upon me ? First, then, as to Listerian antiseptics. As a rule, I employ them ; in hospital always. But in the operation under consideration, they have this one great disadvantage, that the spray seriously cools down the patient, and thus lowers her vitality. If the operation is performed in the old-fashioned and useless way, there is very little shock. If performed in the thorough and sweeping way I am now advocating, there is a serious shock, seeing that from thirty to forty minutes is the very shortest time in which it can be satisfactorily done. Now, let any healthy woman get out of a warm bed, strip herself naked to the waist, and then go and lie down on her kitchen table for forty minutes, and I shall be very much surprised if she has not a cold next day. But in addition to this let a cold spray play upon her, and furthermore let a great mass of heat-conserving skin and fat be carried away from the chest, so that nothing but ribs and muscles intervene between the lung and the air ; and still let the cool spray play upon her. Is not this likely to be very depressing ? I am convinced that it is so ; and if the operator, in place of doing his work rapidly, niggles and fiddles about it, so that the patient is kept for a long time under the combined lowering influences of cold spray, anæsthetic, and loss of blood, then the result is that a distinct catarrhal pneumonia very speedily appears. And this I have seen put the patient's life in imminent jeopardy on several occasions. For this reason, in private, where there is but little fear of septic influences, if the patient be weakly I content myself with simply washing out the wound well with carbolic solution and maintaining a modified antiseptic dressing. In hospital I do

not use the spray till the operation is pretty well completed, when I turn it on for a minute or so, and drench all the parts well before the final stitching up is done. Another point is this: having detached the breast, I leave it hanging by the axillary end; and then, before attacking the armpit, I draw together as much of the wound as will possibly come, and cover up the remainder with sponge or gauze. This has two advantages: it keeps the cold from the chest, and it enables the operator, if he finds he cannot thoroughly remove the glands, or sees the patient becoming collapsed, to terminate the operation at once. If the cancerous lump is deep in the breast, and the skin over it is quite movable, then some of the latter at the margin of the gland may be kept to cover in the wound. But if any part of it is involved, then a circle should be drawn around the breast, and it should be cut clean off without the remotest regard to flaps or coverings of any kind. These are of secondary moment altogether. The breast being finished with, the incision should be carried up into the axilla about an inch below the margin of the great pectoral muscle. Then comes a strong temptation to dissect down the lower flap, and lay bare the latissimus dorsi and the subscapular artery. There is very seldom any occasion for this; and when it is done, if suppuration occurs, a fine pocket for pus is left. I have twice seen the pus filter its way right to the middle of the back, and have had to make a counter-opening below the angle of the scapula.

With regard to the lower axillary glands, they are capable of easy removal, and even the highest ones can, as a rule, be readily brought down from the very top of the cavity, and pinched off between the nails of the finger and thumb. I have never yet found occasion to divide the pectoral muscles, as, even in the three instances mentioned in the printed list, where I was unable to remove the glands, I saw them quite clearly, but was afraid to take away so much of the vein, to which they were closely adherent, as would have been necessary thoroughly to remove them. By the way, it is a question if removing a piece of the vein is after all such a dangerous thing as we think. A short time ago, I removed about an inch and a

half of the internal jugular vein along with some cancerous glands of the neck, and the patient made a more than usually rapid recovery without the slightest bad symptom.

And now, gentlemen, you naturally inquire whether I can show any practical proof that free removal of the breast and glands is likely to prove a more hopeful proceeding than the limited operation which has been the rule until the last few years. On looking over my notes, I find I have records of forty-six cases. I have done a good many more cases, but of many of my earlier ones I unfortunately did not keep any memoranda, as I had no idea that the subject would interest me as much as it has. However much they may have assisted me to form my own conclusions in this matter, they are unfortunately not available for statistical purposes. Concerning those mentioned in the list, I know all about them, and have verified the condition of the patients who are described as remaining free quite recently.

Turning to the fatal cases, you will notice that there are six of these, that is to say there is a mortality of about 13 per cent. That this is a heavy mortality I admit, but, as I have just been endeavouring to show, if the operation is to be of any service at all, it cannot be other than a serious one. In all the fatal cases both breast and glands were removed. In five out of the six the cause of death was undoubtedly a septicæmic state accompanied by breaking down of the wound, and very generally by a fleeting erysipelas. One death was particularly galling, as it occurred in a patient who had to all intents and purposes recovered. The wound was practically healed, as only a piece about the size of a shilling remained, and on the following day she was to leave the Infirmary for the country. That night she had a rigor, and a little red blush came round the small sore. After struggling hard for a fortnight, she succumbed in an undoubtedly poisoned state. Owing to the neglect of a nurse, many of the beds in the ward in which this patient lay were found absolutely rotten, and to this I believe the poor woman's death was due. There is, however, some satisfaction in noting a septicæmic condition as being the main source of

mortality, because it is a remedial one, and it is one that is not in any way special to this operation, but occurs after all operations where great wounds have been made. Had the patients died from shock, or from secondary hæmorrhage, or from exhausting suppuration, the operation might have been considered directly answerable, but we know that had these same patients been all in perfect hygienic conditions,—had they for instance been in the atmosphere of Zermatt,—they would have recovered. Fortunately every year is improving our knowledge of how to ward off the poisonous conditions, and when we shall have banished them, the range of operative surgery will hardly know any bounds. As for the sixth patient, she was killed by the folly of a nurse, who one night left a window open above her head, pouring down upon her a cataract of cold air, which set up a fatal bronchitis. Here neither surgeon nor operation were to blame, but a mistaken zeal in the cause of ventilation.

In this operation there will always be two difficulties to contend against: the age of the patients and their mental state. In my fatal cases, the ages varied from forty-four to sixty-seven. The patients were not young people of eighteen or twenty, whom it is hard work to kill by a surgical operation, but women who had seen their best days, and who, for the most part, had reared children and seen much hard work. As regards age, therefore, the material is not good to work upon, and as regards hopefulness it is very bad. The majority of women are completely prostrated by the discovery that they have a cancerous breast, and look forward to its removal with great horror and dreadful forebodings. Every surgeon knows what a thing it is to have a hopeful patient, and unfortunately everyone who has had much to do with cancerous breasts, knows that the patients generally consider themselves doomed from the beginning, and submit to removal as a last resource. The time of life, therefore, and the despondent mental state induced by the disease, are always likely to act as depressing influences apt to produce a state in which any septicæmic poison finds a congenial soil.

Turning from the fatal cases, it will be noticed that in eleven instances the disease has already recurred. Now, in three of

these, when the highest point in the axilla was reached, it was found that there were still glands so adherent to the vein that they could not be removed, while the condition of the patients was such that it was clear the sooner they were off the table the better, lest an immediate sinking should occur. So that these three were known to be incomplete operations, and the continuance of the disease was expected as a matter of course. If it is asked, Why were operations attempted under such circumstances? I reply that nobody can tell the state of the axillary glands till he sees them. They may shell out like peas, or they may stick to the vein like limpets to a rock. To all appearance none of these three cases seemed more unlikely to be capable of thorough cleaning out than any of the others. Not till the highest glands were reached did this become obvious. In two cases the general nature of cancerous disease was manifest by the malady appearing in the other breast. The last case is interesting, inasmuch as the patient remained free for about a year and a half, and then the cervical glands over the subclavian artery and brachial plexus became affected. She suffered such intense pain in the arm that I cut down upon them and exposed them. I found one cord of the plexus quite surrounded by a couple of hardened glands, which so compressed it, that below the point of pressure it was red and swollen to twice its natural size. With some trouble I dissected the glands from the nerve, and so freed it from their strangling embrace, but unfortunately there were others which had become so adherent to neighbouring tissues, such as the scalenus anticus muscle, that their extirpation was impossible. The wound was healed in about ten days, and the patient departed greatly delighted with the immediate relief from pain which the freeing of the cord produced for her. Of course the disease has gone on progressing, but the breast wound and axilla remain quite sound.

A very important matter is to note the period when re-appearance of the disease was manifest, and the length of time the patient lived after the operation. In nine out of my eleven cases the disease reappeared, and the patients were dead and buried before the lapse of twelve months. In the tenth, the

patient lived fifteen months. This demonstrates two things. The first is that if the disease is going to reappear, it is about ten to one that it will do so within eighteen months. In all the cases that I can remember in the practice of other surgeons, I should say that pretty much the same thing held good. Now, in a paper on this subject, read at the International Congress by Dr Samuel Gross of Philadelphia (whose work on the breast is a very admirable one), he stated that if a patient lived three years after operation without reappearance of disease, the probabilities were most strongly in favour of her remaining permanently well. With this statement I am firmly inclined to concur. The second thing that is demonstrated is that the popular idea that operating prolongs life, even if imperfectly done, is quite wrong. I believe this to be a perfect delusion. I believe that all these eleven patients would have lived longer if they had never been touched. Yet you hear the operation being constantly advised on the ground that, if it does not cure, it will at any rate give a little longer lease of life. On the contrary, the excitement and increased cell-growth, that are set up in the parts by an operation, make everything that is left behind of a malignant nature, grow with double and treble speed, and I am even inclined to think that the deaths after reappearance are more painful than those where the cancer has never been touched. If a surgeon does not see his way to a clean sweep, I can only implore him to let things alone, for in few diseases does meddlesome interference work more mischief than this. It is but right that, while pleading the advantages of early and free operation, one should also admit that if it fails thoroughly to cure, it does not improve the patient's state, but makes it decidedly worse.

Let us now turn from the fatal cases, and from those in which the disease has returned, to those more satisfactory ones where surgery has been of service. The list first shows three instances where the patients died in eighteen months to two years from the date of the operation, without any signs of return of the cancer. One died from paralysis, one from liver disease, and the cause of death in the third instance I could not find out. Even

if the disease which finally took the patients off had been internal cancer, the operation would have been of immense service to them, but, as I have no evidence that this was the case, they may fairly take a secondary rank as cures. I can point to ten cases having immunity for periods of two to ten years, and five from one to two years. Seven cases have reached the period of three years, which, as we have just seen, makes the chance of reappearance of the disease in them but little greater than that of its original appearance at all. Now let us take only the cases of three years and upwards. They are seven in number, which may be reasonably reckoned cures, as against seventeen deaths and reappearances; or one success to two and a half failures. Even at this very low rate I claim that the operation is worth doing, considering the hopeless nature of the disease, and considering that for a long period surgeons have been operating so unsuccessfully that many had quite given the matter up in despair. I think any patient, if offered the chance, would take it even with the odds of 25 to 10 against her. But if we come down to one year and nine months, then there are twelve cases without return as against seventeen failures. And, remembering that I have shown you that every one of my reappearances were manifest within one year and six months, I think I might guarantee these twelve as safe. If I am right in doing so, the odds are reduced to 15 to 10 against the patient. I firmly believe that this proportion will be attained by the time my cases are all followed up to the end, and I hope I may live long enough to be able again to report upon them and prove the correctness of this statement. I am well aware that the weak feature in my paper is that sufficient time has not elapsed thoroughly to test the cases; but some years must come and go before that can be done. Meantime, I am sufficiently sure of my ground to feel justified in pressing upon operating surgeons an early and free removal of cancerous breasts, and, as a necessary part of the operation, a thorough clearing out of the axillary glands.

SYNOPSIS OF FORTY-SIX CASES, IN FIVE OF WHICH THE BREAST ALONE WAS REMOVED, WHILE IN FORTY-ONE THE BREAST WAS REMOVED AND THE AXILLARY GLANDS CLEARED OUT.

- 6 cases proved fatal after the operation.
 11 cases had reappearance of the disease, and 10 are already dead from it.
 3 cases remained free, and died from other causes under two years.
 10 cases remained free from two to ten years after operation.
 5 cases remained free from one to two years after operation.
 9 cases have been done within last twelve months, and cannot be reckoned upon yet.
 1 case recovered, but has been lost sight of.
 1 case was done for relief only, without hope of cure.

Cases Fatal after Operation.

| No. | Condition. | Age. | Cause of Death. | Period after Operation. |
|-----|------------|------|-------------------------------------|-------------------------|
| 1 | Married | 45 | Septicæmia and fleeting erysipelas, | Three weeks. |
| 2 | Single | 60 | Erysipelas, | Two weeks. |
| 3 | Married | 44 | Bronchitis, | Twenty days. |
| 4 | Married | 67 | Sloughing of wound and erysipelas, | Seven days. |
| 5 | Married | 49 | Septicæmia and fleeting erysipelas, | Eight days. |
| 6 | Married | 40 | Do. do. | Six weeks. |

Cases in which the Disease Reappeared.

| No. | Condition. | Age. | Notes. | Interval between Operation and Fatal Termination. |
|-----|------------|------|--|---|
| 1 | Married | 42 | Operation incomplete, inasmuch as glands could not be thoroughly removed, from adhesion to axillary vein. Reappearance in axilla of same side and also in opposite breast. | Eight months. |
| 2 | Single | 36 | Operation incomplete for same reason as above. Reappeared in axilla of same side. | Seven months. |
| 3 | Married | 52 | Operation incomplete for same reason as above. Reappeared in axilla of same side. | Three months. |
| 4 | Married | 70 | Breast alone removed, as tumour seemed small, and glands were not palpably affected. Reappeared in axilla. | Ten months. |
| 5 | Married | 74 | A rapidly growing juicy sarcoma: not scirrhus. Breast alone removed. Rapid reappearance in neighbourhood of cicatrix. | A few months. |
| 6 | Married | 38 | Cicatrix and axilla remained sound. Reappeared in intercostal muscles close to sternum, and spread to lung. | Fifteen months. |

Cases in which the Disease Reappeared—continued.

| No. | Condition. | Age. | Notes. | Interval between Operation and Fatal Termination. |
|-----|------------|------|---|---|
| 7 | Married | 40 | Reappeared in cicatrix. This removed, but opposite breast became affected. Died from a pleurisy, probably due to disease penetrating to pleura. | Six months. |
| 8 | Single | 54 | Cicatrix and axilla remained free. Re-appearance in intercostal muscles close to sternum. | Eleven months. |
| 9 | Married | 45 | Recurred in upper part of axilla. | Under twelve months. |
| 10 | Married | 40 | Recurred in form of small shot in the skin around the cicatrix. | Under twelve months. |
| 11 | Married | 54 | Remained for eighteen months free. Re-appearance in cervical glands with great pain in the arm. Attempted removal in May, 1882. Patient still living. | |

Cases where Death has occurred from other causes : Patients remaining free from Breast Cancer.

| No. | Condition. | Age. | Operation. | Cause of Death. | Period between Operation and Death. |
|-----|------------|------|--------------------|-----------------|--|
| 1 | Married | 54 | Breast only. | Not known. | Died after two years : no reappearance. |
| 2 | Married | 41 | Do. | Paralysis. | Died after one year and six months : no reappearance. |
| 3 | Married | 62 | Breast and glands. | Liver disease. | Died after one year and nine months : no reappearance. |

Cases remaining free from Two to Ten Years.

| No. | Condition. | Age. | Operation. | Period since Operation. |
|-----|------------|------|--------------------|----------------------------|
| 1 | Single | 62 | Breast and glands. | Ten years. |
| 2 | Married | 40 | Do. | Seven years. |
| 3 | Married | 56 | Do. | Three years, eight months. |
| 4 | Married | 49 | Do. | Three years, four months. |
| 5 | Married | 68 | Breast only. | Three years, four months. |
| 6 | Single | 67 | Breast and glands. | Three years, two months. |
| 7 | Married | 57 | Do. | Three years. |
| 8 | Single | — | Do. | Two years, six months. |
| 9 | Married | 47 | Do. | Two years, three months. |
| 10 | Married | 50 | Do. | Two years. |

Cases remaining free from One to Two Years.

| No. | Condition. | Age. | Operation. | Period since Operation. |
|-----|------------|------|--------------------|-------------------------|
| 11 | Married | 47 | Breast and glands. | One year, ten months. |
| 12 | Married | 57 | Do. | One year, nine months. |
| 13 | Married | 41 | Do. | One year, three months. |
| 14 | Married | 50 | Do. | One year, two months. |
| 15 | Married | 52 | Do. | One year. |

Cases operated upon during the past year.

| No. | Condition. | Age. | Operation. |
|-----|------------|------|--------------------|
| 1 | Married | 45 | Breast and glands. |
| 2 | Married | 42 | Do. |
| 3 | Single | 61 | Do. |
| 4 | Single | 40 | Do. |
| 5 | Married | 56 | Do. |
| 6 | Married | 45 | Do. |
| 7 | Married | 40 | Do. |
| 8 | Married | 50 | Do. |
| 9 | Single | 38 | Do. |

Case in which subsequent History lost.

| No. | Condition. | Age. | Operation. | |
|-----|------------|------|--------------------|------------------------------|
| 1 | Married | 50 | Breast and glands. | Could not trace the patient. |

Case done for Relief without hope of Cure.

| No. | Condition. | Age. | Operation. |
|-----|------------|------|--|
| 1 | Married | 58 | Breast a great ulcerating mass, smelling horribly, and giving great pain. Swept away along with both pectoral muscles, which were infiltrated. Glands removed. Third costal cartilage subsequently necrosed and dropped out, but wound healed over. Died after eight months from recurrence in lungs and lower end of humerus, having lived free, during that time, from pain or serious discomfort. |

